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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Joseph R. Byrum

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EXAMINER

ROBINSON, KEITH O NEAL

ART UNIT

PAPER NUMBER

1638

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/618,101	Applicant(s) BYRUM ET AL.	
	Examiner KEITH O. ROBINSON	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Applicant's cancellation of claims 33-40, filed November 18, 2008, has been received and entered in full.

2. Claims 1-32 are under examination.

Response to Arguments

3. Applicant's arguments, see pages 8-11 of 'Remarks' filed November 18, 2008, regarding the 35 USC 112, first paragraph rejection for written description on pages 3-7 of the Office Action mailed August 18, 2008 have been fully considered and found persuasive. The rejection has been withdrawn.

4. Applicant's arguments, see pages 12-13 of 'Remarks' filed November 18, 2008, regarding the 35 USC 112, first paragraph rejection for enablement on pages 7-8 of the Office Action mailed August 18, 2008 have been fully considered and found persuasive. The rejection has been withdrawn.

Claim Rejections - 35 USC § 112, second paragraph

5. Claims 1 and 15 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection is maintained for the reasons of record as set forth on pages 2-3 of the Office Action mailed August 18, 2008. Applicant's arguments, filed November 18, 2008, have been fully considered but are not persuasive.

Applicant argues that the claims are definite as they currently stand because the limitations relating to protein content, oil content and protein plus oil content are linked by “and” and “65%” is between 64-70%, thus one of ordinary skill in the art would be apprised to the scope of the claim (see page 8, 3rd paragraph of ‘Remarks’ filed November 18, 2008).

This is not persuasive. The claims recite a mean whole seed total protein content of between 45% and 50%, a mean whole seed total oil content of at least 20% and a mean whole seed total protein plus oil content of between 64% and 70%. These numbers do not add up correctly because the addition of the claimed mean whole seed total protein content and the mean whole seed total oil content would equal to a mean whole seed total protein plus oil content of between 65% and 70%. Thus, the claims fail to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

6. Claims 1-32 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox (Crop Sci. 38: 900, 1998), in view of Conway (U.S. Patent No. 6,140,556, October 31, 2000). The rejection is maintained for the reasons of record as set forth on pages 8-13 of the Office Action August 18, 2008. Applicant's arguments, filed November 18, 2008, have been fully considered but are not persuasive.

Applicant argues that the Wilcox reference does not describe C1944 as an agronomically elite soybean plant, but simply states that this line may be useful for further breeding and one of skill in the art would not recognize that this line is an

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agronomically elite soybean plant (see page 13, last paragraph to page 14, lines 1-3 of 'Remarks' filed November 18, 2008).

This is not persuasive. The specification teaches that C1944 is soybean variety SN30003 (see page 43, lines 21-24) and that an agronomically elite soybean plant has a yield in excess of 35 bushels per acre (see page 10, line 10). Wilcox teaches that soybean line C1944 has a yield of 2999 kg per hectare (see page 900, 1st column); therefore, one of skill in the art would recognize that this line is an agronomically elite soybean plant.

Applicant argues that although SN30003 might be used in a cross with a second variety that displays 20% seed oil content, a skilled soybean breeder simply would have had no expectation of success, i.e. that any resulting progeny line would display the claimed characteristics because of the strong negative correlation between seed oil content and seed protein content (see page 14, 1st paragraph to page 15, lines 1-2 of 'Remarks' filed November 18, 2008).

This is not persuasive. The specification teaches that C1944 is soybean variety SN30003 (see page 43, lines 21-24). Wilcox teaches that C1944 is an agronomically elite soybean plant having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield (see page 900, 1st column) and Conway teaches using a soybean cultivar in a cross with another soybean cultivar to produce novel soybean cultivars. Thus, one of ordinary skill in the art would have had an expectation of success, i.e. that any resulting progeny plant line would simultaneously display the

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claimed characteristics, such as the claimed simultaneous levels of seed oil content, seed protein content and seed oil plus seed protein content because Conway teaches “[b]reeding programs combine desirable traits from two or more cultivars...into breeding pools from which cultivars are developed by selfing and selection of desired phenotypes...[and] [t]he new cultivars are evaluated to determine which have commercial potential” (see column 2, lines 52-56). One of ordinary skill in the art would recognize that desirable trait lacking in soybean variety SN30003 could be supplemented in any progeny by crossing soybean variety SN30003 with another soybean plant that had the desired trait to produce progeny having the claimed characteristics. See MPEP 2141(II) (C) where it states, “A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton.”KSR, 550 U.S. at ___, 82 USPQ2d at 1397. “[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.”Id. Office personnel may also take into account “the inferences and creative steps that a person of ordinary skill in the art would employ.”Id. at ___, 82 USPQ2d at 1396”.

Wilcox teach that soybean line C1944 (i.e. soybean variety SN30003) is a high protein soybean line that has an oil content of about 18.4% (see page 900, 1st column). Therefore, one of ordinary skill in the art would understand that a mean would encompass seed that had oil above 18.4% wherein said seed would have at least 20% seed oil.

Applicant argues that the Wilcox reference does not describe characteristics of progeny plants and that there would have been no expectation that progeny of such a

cross would have displayed the claimed characteristics (see page 15, 1st paragraph of 'Remarks' filed November 18, 2008).

This is not persuasive. Wilcox teaches that soybean line C1944 (i.e., soybean variety SN30003) will be useful for increasing seed protein while minimizing reductions in seed oil content (see page 900, 1st column, 1st paragraph). It is known in the art that protein and oil have a negative correlation in soybean (i.e., when one is high the other is typically low). However, soybean line C1944 has high protein content as well as good oil content. Thus, based on the teachings of Conway, it would have been obvious to one of ordinary skill in the art to use soybean line C1944 (i.e. soybean variety SN30003) in a cross with another soybean line to produce a soybean line with the claimed characteristics of the claimed invention because Conway teaches that soybean varieties can be crossed to produce progeny with desired traits.

Applicant argues that Wilcox in view of Conway is at best an invitation to experiment further, but with no expectation of success since neither reference contains teachings that would lead one of ordinary skill in the art to expect that the claimed seed protein plus seed oil levels were achievable and in addition cites Wilcox and Cavins as evidence (see page 15 last paragraph to page 16, lines 1-10 of 'Remarks' filed November 18, 2008).

This is not persuasive. Wilcox teaches that soybean line C1944 (i.e., soybean variety SN30003) will be useful for increasing seed protein while minimizing reductions in seed oil content (see page 900, 1st column, 1st paragraph). Though it is known in the art that protein and oil have a negative correlation in soybean, soybean line C1944 has

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high protein content as well as good oil content. Thus, based on the teachings of Conway, it would have been obvious to one of ordinary skill in the art to use soybean line C1944 (i.e. soybean variety SN30003) in a cross with another soybean line to produce a soybean line with the claimed characteristics of the claimed invention because Conway teaches that soybean varieties can be crossed to produce progeny with desired traits.

Claim Rejections - 35 USC § 102/103

7. Claims 1-12, 14, 15, 29 and 32 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wilcox (Crop Sci. 38: 900, 1998). The rejection is maintained for the reasons of record as set forth on pages 13-15 of the Office Action mailed August 18, 2008. It is noted that Applicant did not provide any arguments regarding the rejection.

Conclusion

8. No claims are allowed.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH O. ROBINSON whose telephone number is (571)272-2918. The examiner can normally be reached Monday – Friday, 7:30 a.m. - 4:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson
/David H Kruse/
Primary Examiner, Art Unit 1638